

## Weekly report (2017-5-15-----2017-5-21)

May 21<sup>st</sup>, 2017, 17:21pm

### 1. Knowledge

I have been still reading Prof. Chen's "big black book" systematically, and take this opportunity to broaden my knowledge scope in the field of visualization.

### 2. Research

#### 2.1 paper reading

1. Line Graph or Scatter Plot? Automatic Selection of Methods for Visualizing Trends in Time Series

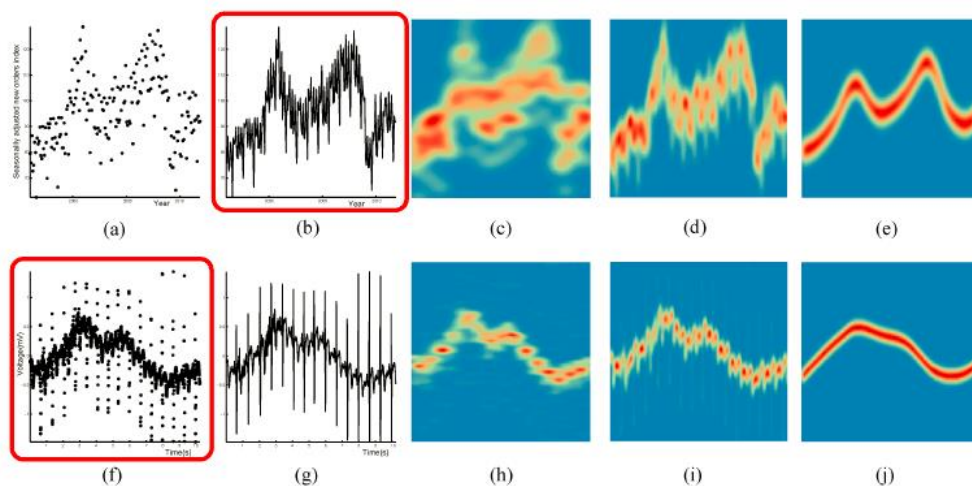
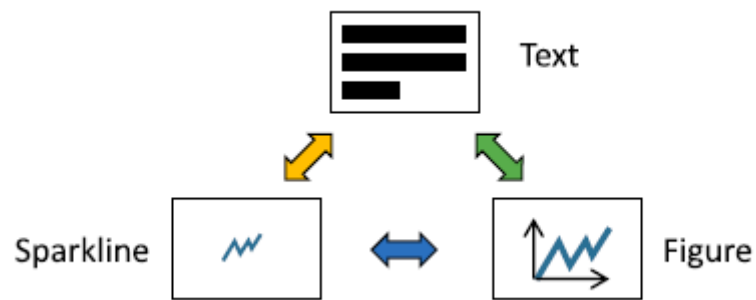


Fig. 13. Selecting the visualization (highlighted with red box) that is more effective in revealing the overall trends of two real time series, which are shown in the first and second rows, respectively. (a,f) scatter plots; (b,g) line graphs; (c,h) point density fields; (d,i) line density fields; and (e,j) trend density fields.

Line graph has been used in the visualization of time series data for a long time, this paper mainly describes an automatic method to choose between line graph and scatter plot and offer the best choice. For the time series data, when we omit all lines that connect time points, line graph → scatter plot.

The paper's hypothesis is that it is possible to select the right visualization automatically. The author designed a series of experiments to approve it and there was a consistency score which was an indicator can be measured. At last, the paper designed a user study and get a conclusion about their automatic methods.

2. Word-Sized Graphics for Scientific Texts



The author proposed a new kind of formats which can link visualization and text, it is called sparklines – word-sized graphics. In order to avoid additional cognitive load caused by splitting the readers’ attention between figures and texts, the author embeds visualizations into text and creates a combined representation. This work’s aim is to study the potential of word-sized graphics to enrich scientific texts.

### 3. Tasks in the near future

#### 3.1 Graduation thesis

#### 3.2 TOEFL

On June 3<sup>rd</sup> will be the first time for me to take the examination of TOEFL, I will do my best and have a good try.